

CLAIMS

We claim:

- 1 1. A display system comprising at least one display panel, each said at least
2 one panel comprising:
3 a planar support member comprising a plurality of parallel first bars connected to
4 a plurality of parallel second bars at intersections to form an open mesh having a front
5 surface, a rear surface, and a plurality of openings extending between said surfaces,
6 each said opening being framed by a pair of said first bars and a pair of said second
7 bars;
8 a plurality of lights at respective said intersections, each said light being visible
9 from said front surface and having a pair of terminals; and
10 a grid of mutually isolated wires located on said rear surface, each said wire
11 being located on a respective said bar and being connected to a respective one of each
12 said pair of terminals located at the intersections on the respective said bar.
- 1 2. A display system as in claim 1 further comprising an aperture at each said
2 intersection, each said aperture serving as a socket that receives a respective said light.
- 1 3. A display system as in claim 1 wherein said lights are LED's.
- 1 4. A display system as in claim 1 wherein said support member further
2 comprises a support base surrounding each said intersection.
- 1 5. A display system as in claim 4 further comprising a light-transmitting cap
2 fixed to the front surface over each said support base.
- 1 6. A display system as in claim 5 wherein each said cap is provided with
2 arms which extend through said openings and engage said rear surface of said support
3 member.

1 7. A display system as in claim 1 wherein said bars are formed with channels
2 that open on the rear surface and receive respective said wires therein.

1 8. A display system as in claim 7 further comprising a plurality of covers fixed
2 to the support member over respective said intersections.

1 9. A display system as in claim 8 wherein each said cover has a central
2 portion over the intersection and four arms that extend radially into the channels of the
3 first and second bars that are connected at the intersection, each said cover being
4 substantially flush with said rear surface.

1 10. A display system as in claim 1 wherein said support member further
2 comprises a circumferential frame surrounding said open mesh.

1 11. A display system as in claim 10 wherein said frame is provided with
2 channels which can carry said wires in bundles for distribution to said grid.

1 12. A display system as in claim 10 further comprising a cross member
2 extending across said circumferential frame between an adjacent pair of said first or
3 second bars.

1 13. A display system as in claim 1 wherein said rear surface of said support
2 member is provided with recesses surrounding some of said openings, said panel
3 further comprising floor members which are received in said recesses flush with said
4 rear surface, and at least one electronic module mounted to said floor members.

1 14. A display system as in claim 13 further comprising a light-transmitting cap
2 fixed to the front surface over each said support base, wherein said cap is provided with
3 arms which extend through said openings and engage said rear surface of said support

4 member, at least some of said arms engaging said floor members to hold said floor
5 members in said recesses.

1 15. A display system as in claim 1 comprising a plurality of said display panels
2 connected together serially.

1 16. A display system as in claim 15 wherein each said panel comprises at
2 least one plug member for connecting to wires on an adjacent said light panel.

1 17. A display system as in claim 15 wherein at least two said panels are
2 connected by hinges so that said panels can be folded together to form a stack.

1 18. A display system as in claim 17 wherein said hinges comprise at least one
2 first hinge connecting a first pair of said panels so that said first pair of panels can be
3 folded together with their front surfaces in mutually facing relation, and at least one
4 second hinge connecting a second pair of said panels so that said second pair of panels
5 can be folded together with their rear surfaces in mutually facing relation.

1 19. A display system as in claim 18 wherein each said first hinge is fixed to
2 said front surfaces and designed so that said front surfaces are spaced apart when said
3 panels of said first pair are folded together, and each said second hinge is fixed to said
4 rear surfaces and designed so that said rear surfaces are spaced apart when said
5 panels of said second pair are folded together.

1 20. A display system as in claim 15 wherein said panels are modular, at least
2 some of said panels being substantially identical.

1 21. A display system as in claim 15 further comprising a power cord to one of
2 said panels, each serially connected panel being provided with power from said one of
3 said panels.

1 22. A display system as in claim 21 further comprising a transformer for
2 reducing mains voltage to a low voltage suitable for powering LED's, said transformer
3 being located in said power cord.

23. A display system as in claim 21 wherein said power cord is provided with a plug for inserting in a car's cigarette lighter.

1 24. A display system as in claim 1 wherein said support member is injection
2 molded plastic.

1 25. A display system as in claim 1 further comprising a controller for driving
2 said lights in a moving display mode in at least one of a horizontal format and a vertical
3 format.

1 26. A display system as in claim 25 wherein said controller comprises a switch
2 for switching between a vertical format and a horizontal format.

1 27. A display system as in claim 25 wherein said controller is fixed to the rear
2 surface of a first one of said support members.

28. A display system as in claim 15 wherein said first bars represent rows of
said lights and said second bars represent columns of said lights, said system further
comprising a row driver for driving the rows of all of said panels and a plurality of
column drivers for driving the columns of respective panels.